

REMARKS

Claims 5, 19, 23 and 24 have been canceled.

Claim 1 has been amended to include the limitations of claims 5 and 2, except for the thickness.

Claim 16, to the closure means, includes the limitation of claims 2 and 5, including the thickness, and parallels prior claim 5 which has been canceled.

The remaining claims have been amended according to the suggestions in the office action, and to correct overlooked, obvious errors so as to place the claims in condition for allowance.

Claim 22 is a method claim which parallels prior claim 5.

The objections and rejections in the office action will be addressed in the same sequence as they are set forth.

The assumption that the "lower" olefin of the polymono lower olefin of "(a)" does not embrace styrene, is correct.

At page 7 line 11 the term "ADHESIVES" has the quotation mark on the left side of the word only because it is the title at the beginning of the text quoted from the brochure, which text concludes on the following page with the words " . . . tailor hot melt PSAs for a variety of end uses."

With respect to the dots following the word "phone" which appear at line 19 of page 7, it is respectfully pointed out that the dots were provided in lieu of the phone number. The specification has been amended to delete the dots and stating, in parentheses, that the phone number has been deleted as it is not relevant in the context of this application.

The rejection of claims 1, 2, 4-11 and 13-24 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, that the applicant had possession of the claimed invention, is respectfully traversed.

The term "free of adhesive properties" has been replaced with "free of tackiness"

though it is respectfully submitted that there is no basis stated, and applicant knows of no basis, upon which to make a meaningful difference between the terms in the context in which they are used.

The dictionary meaning of the adjective "tacky" is "Slightly adhesive or gummy to the touch; sticky"; the noun is "tackiness". (See *The AmericanHeritage Dictionary of the English Language*, Houghton Mifflin Company, Boston).

The term "adhesive properties" was used simply to mean tackiness, which meaning would appear reasonable to one skilled in the art. An adhesive cannot function as an adhesive without being tacky at some stage.

The office action states "The specification as filed while supporting addition of 5-150 parts of polymono (lower) olefin to component "a" does not support such addition to component "b" and applicant's limitation reciting that "each" of (a) can be as the polyvinyl lower olefin is therefore new matter. Applicants may therefore delete the term "each" and replace it with "b" in order to overcome the above rejection based on new matter."

It is respectfully submitted that in the foregoing statement, the phrase "applicant's limitation reciting that "each" of (a) can be as the polyvinyl lower olefin is therefore new matter." is not clear.

Further, in the foregoing statement, wherein it is stated "Applicants may therefore delete the term "each" and replace it with "b" (the TPV) . . .", it appears that what was meant was "replace it with component "a" (the block copolymer) . . ." The claims have been amended accordingly.

The rejection of claims 1, 2, 4-11 and 13-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, on the basis that the newly added term "polymono (lower) olefin" in the independent claims is unclear in that the term "lower" is subjective, is respectfully traversed.

The original specification was amended at page 4, lines 4 – 6, in the amendment filed 02 January 2004, to state:

"When either (i) or (ii) is too hard, it may be melt-blended with an unreactive

polymono(lower)olefin, the olefin having from 2 to 4 carbon atoms, preferably with more than 5% by weight of the TPE.”

The basis for the foregoing 01/02/04 amendment was the language in originally submitted claim 3 which was incorporated in amended claim 1 and correspondingly canceled in claim 3 because the limitations of this claim were included in the amended claim 1.

In addition, the language in the claims was used in the original specification, at page 17 lines 3 – 6, which stated:

“The polyolefin melt index modifier or hardener is preferably a homopolymer of a monoolefin having from 2 to 8 carbon atoms, preferably an α - β monoolefin having from 2 to 4 carbon atoms, or a copolymer of one of the foregoing with one or more of the others.”

One skilled in the art will readily appreciate that, if a monoolefin is defined as one having from 2 to 8 carbon atoms, then a monoolefin specified as having from 2 to 4 carbon atoms can be neither a “higher” monoolefin, nor the same, but only a “lower” monoolefin.

The rejection of claims 1, 2, 4, 16 and 18-24 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vermeire et al. (U.S. 5,278,220), is respectfully traversed.

The statute 35 U.S.C. §102 calls for identical disclosure or description between the subject matter sought to be patented and the prior art. Reliance upon 35 U.S.C. §102 for a rejection calls for identical disclosure or description between the subject matter sought to be patented and the prior art. It is evident that the stated limitations in the claims are not identically disclosed in the Vermeire et al patent.

To begin with, the preamble of the claims sets forth a critical limitation, namely that the subject matter of the claims is a sealant.

The well-settled law is that "Whether a preamble of intended purpose constitutes a limitation to the claims is, as has long been established, a matter to be determined on the facts of each case in view of the claimed invention as a whole. . . . This purpose, set forth in the [preambles of the] claims themselves, "is more than a mere statement of purpose; and that language is essential to particularly point out the invention defined by the claims." *In re Bulloch*,

203 USPQ 171, 174 (CCPA 1979). See also *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 896, 221 USPQ 669, 675 (Fed. Cir.), cert. denied, 469 U.S. 857, 105 S.Ct. 187 (1984) where the court stated that the limitations appearing in the preamble are necessary to give meaning to the claim and properly define the invention.

It is further immediately evident that the Vermeire et al composition is an age-resistant composition the properties of which are unrelated to a sealant in which the critical property is stated to be its particularly defined oxygen permeability, that is, the sealant's barrier properties. Not surprisingly, the function of the reference composition is unrelated to a sealant or closure means. The claims as amended are not anticipated by the disclosure of the '220 patent.

To illustrate, right at the outset, the '220 Abstract proclaims:

Improved properties during aging are demonstrated by thermoplastic polymer compositions comprising selectively hydrogenated vinylaromatic compound/conjugated alkadiene block copolymer, thermoplastic engineering polymer and a poly(alkylene) plasticizer.

Vermeire et al then state:

"A principal problem with the compositions of the above references is the loss of the currently used plasticizer oils, as by bleedout, from compositions exposed to heat and/or light during aging with attendant reduction of desirable physical properties." (see col 2 lines 12 -16).

Aging, which occurs over a relatively long time, is the process of interest in the '220 patent and "bleeding" was a condition encountered, which condition was to be negated. The improvement in aging referred to was relative to the use of a paraffinic oil which was replaced with polyisobutylene oil.

Further, to the extent that one might even consider barrier properties when reading Vermeire et al, one would intuitively believe that loss of a low molecular weight plasticizer due to "bleeding", would actually improve barrier properties not worsen them, whether the plasticizer was the paraffinic oil or the polyisobutylene oil. If one could use unplasticized block copolymer as a sealant there would be no logical reason to use a plasticized one.

Stated differently, one seeking to use a block copolymer as a sealant against permeation by oxygen would not look to the plasticized compositions of Vermeire et al to

provide an answer to his quest, and there is nothing in Vermeire et al to suggest that their compositions leave out either the Kristalex F 120 α -methylstyrene or the Durcal 5 filler in the combinations they used.

It is evident that the reason the block copolymer is plasticized in Vermeire et al is to provide it with better aging properties and heat resistance, not to mention elasticity, etc. required for elastic films, grips for golf clubs and the like, which properties are unrelated to barrier properties. The problem they perceived, namely loss of plasticizer due to "bleeding", worsened the properties they were interested in, and that was the problem they addressed.

Referring to prior art polymers, Vermeire et al state:

"The above references teach a number of polymeric I0 (*sic*) compositions used for a number of purposes. However, there are many applications of the selectively hydrogenated block copolymers where the compositions of these references are not suitable because of inadequate physical properties, e.g., applications such as elastic films used in the medical area and grips for golf clubs, rackets and fishing rods in the sporting goods field." (col 2, lines 4 – 11). They clearly recognized that the properties of the compositions were dictated by the particular purpose for which they were formulated.

In the Summary of their specification, Vermeire et al specifically emphasize the properties which distinguish their composition from prior art compositions. They state: "The compositions exhibit improved physical properties, as compared to prior art compositions, including the retention during aging of tensile strength, color stability and low volatility upon exposure to heat and/or light. These properties permit utilization of the compositions in applications where earlier compositions have not proven satisfactory."

This is the only reference made to the exposure of their composition to light. There is no suggestion that any of their compositions are light-permeable, as applicant has claimed in claim 18, and the office action provides no reason for concluding that the '220 compositions are light-permeable.

Later in the specification, referring to their composition, Vermeire et al reiterate:

"The compositions of the invention are characterized by improved properties such as retention of tensile strength and flow rate in combination with color retention and low volatility during aging when exposed to heat and light over long periods of time; as compared with related compositions of the prior art. Such improved properties provide better

performance in applications such as medical, wire and cable coating, automotive and floor and roofing and in sporting goods applications such as grips for fishing rods and golf clubs.” (col 5, line 65 to col 6, line 6).

Because aging and the retention of specific physical properties desirable in elastic films, grips for golf clubs and the like, are the and specific and only concern of Vermeire et al, their patent teaches a composition which has a vast array of physical properties, of which only hardness, is germane to applicant’s sealant or closure means. They make no mention of barrier properties, desirable or not, and do not teach oxygen permeability which is of concern only in those instances in which the contents are sensitive to degradation by oxygen, not time and not high temperatures, neither of which would be of concern if the contents were not sensitive to degradation by oxygen.

Though it is recognized that the office action has not alleged that the Vermeire et al composition discloses that it could be used as a sealant, it is respectfully submitted that elastic films, grips for golf clubs, rackets and fishing rods, wire and cable coating, or automotive and floor and roofing have nothing in common with a sealant in which the critical requirements are specified in each of the applicant’s independent claims.

What the office action does state is:

“Note that 4.46 mm circular disks may be produced at column 8 lines 63-65, objects which could reasonably be said to embrace a bottle cap whether or not they are disclosed to be usable as caps.”

It is evident that the “circular disks” cannot be used as bottle caps or any other closure means such as a cork or stopper to plug the throat in the neck of a bottle. For a disk to be used as a bottle cap, there would have to be a suggestion that the disk be held within a bottle cap. Without such a suggestion, only applicant’s disclosure could provide the suggestion.

The only reference to circular disks in the ‘220 specification is as follows: “Test samples in the form of 4.46 mm circular disks were cut from injection molded test plates of compositions 1, 6, 7, 9, A and B. The samples were placed in a circulating air oven at a constant temperature of 120°C. for a period of up to 12 weeks. At the end of each two week period, the samples were weighed and measured.” (col 8, lines 63-68).

It is unnecessary to comment on the obvious fact that these measurements, of particular interest, could have been more accurately made if the test plates themselves, each

150 mm x 150 mm x 2 mm (see col 7, lines 5-6) were used, rather than the circular disks cut from the test plates. Patentees themselves refer to the “test plates” because that is a typical and normal test size. They chose to ignore that typical usage when they cut the disks, each only 0.1756 inch in diameter, and tested these where the error of measurement would be much greater. In any event, the office action does not state how or why a circular disk less than one-fifth of an inch ($1/5$ or 0.20”) in diameter would suggest to one skilled in the art that he could use such a disk within a bottle cap – not unless he had the unusual problem of having to cap a bottle with a 0.20” diameter neck (less than $1/3$ the diameter of a dime).

The office action states:

“With regard to applicant's characteristics of the materials explicitly recited by the instant claims and by the patent are the same and as identical materials have identical characteristics, the characteristics of the patent and application claims would reasonably appear to be the same and furthermore applicant's hardness values are explicitly disclosed by the patent, further indication that patentees' and applicant's compositions inherently have the same properties.”

As already pointed out, an examination of the disclosure of the ‘220 patent shows that the properties of interest to the patentees are unrelated to those at issue in applicant's invention, and those properties were derived from a combination of either, (i) two plasticizers, namely Kristalex F 120 α -methylstyrene (see claim 11 of the ‘220 patent) and polyisobutylene, or (ii) polyisobutylene and filler. Applicant's claims exclude both a plasticizer other than polyisobutylene and a filler which might have any effect on the desired properties.

It is readily conceded that Vermeire et al broadly disclose a hydrogenated block copolymer which may be modified with either (i) a combination of plasticizers, one of which is poly(isobutylene) or (ii) a combination of poly(isobutylene) and a filler; and they claimed the composition even more broadly.

However, it is evident that there is nothing critical about the choice of plasticizer(s), other than it should not be a paraffinic oil. Proof of such lack of criticality is the claiming of numerous plasticizers including “low molecular weight polymer of propylene, 1-butene or

isobutylene, or mixtures thereof, or a poly(aryl-substituted alkylene) derived predominantly from α -methylstyrene.” (see claim 11).

Applicant readily concedes that, if there was a suggestion to use their compositions as a sealant (there isn't), Vermeire et al state any one of the four plasticizers, or a mixture, could be used. Applicant has claimed only the poly(isobutene) oil which he found to result in an effective and desirable sealant.

Since claim 1 recites a sealant “consisting essentially of” which clearly excludes a plasticizer other than polyisobutylene oil, the office action fails to state why one skilled in the art would disregard the other plasticizers specified and focus upon the poly(isobutylene).

Clearly, where bleed out and aging are not relevant factors, there is no good reason why one skilled in the art would consider using their composition.

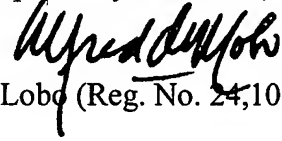
Note that the effective compositions for which data are provided in the '220 patent, do not rely on the poly(isobutylene) oil to provide the desirable aging properties, but a combination of the oil with well-known anti-aging components. In Table I, 100 parts of the Hyvis 200 or Napvis 30 oil is used in combination with 20 parts of Kristalex 120 (a second) plasticizer in every example. In Table VII 100 parts of the Hyvis 200 is used in combination with 180 parts of Duracal 5 filler.

There is no reason to believe that the oil, without a secondary plasticizer or a filler would provide the critical oxygen permeability required of the sealant applicant has claimed, and the office action provides no reason why one making the composition would seek to use it as a sealant which, applicant has found, has unexpectedly good barrier properties.

It is respectfully submitted that claim 1, as currently amended, defines a sealant which would not be obvious because there is nothing in the Vermeire et al reference to either suggest to one skilled in the art, or to motivate him, to make the defined sealant. Neither are the remaining claims, as amended to incorporate the suggestions of the office action, obvious in view of the teachings of Vermeire et al.

In view of the foregoing remarks, arguments, and amendments to the claims, it is respectfully submitted that the basis for the rejections have been overcome and that the claims are in condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Alfred D. Lobo", written over the printed name.

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